



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,874	12/09/2003	Ruben F. Lah	9312.52	6740
21999 7590 01/13/2011 KIRTON AND MCCONKIE 60 EAST SOUTH TEMPLE, SUITE 1800 SALT LAKE CITY, UT 84111				
EXAMINER				
LEUNG, JENNIFER A				
ART UNIT		PAPER NUMBER		
1774				
MAIL DATE		DELIVERY MODE		
01/13/2011		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/731,874

Applicant(s)

LAH, RUBEN F.

Examiner

JENNIFER A. LEUNG

Art Unit

1774

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-47 and 49-58 is/are pending in the application.
- 4a) Of the above claim(s) 11-46 and 53-58 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-10,47 and 49-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on November 2, 2010 has been considered. Claims 2, 4, 48 are canceled. Claims 11-46 and 53-58 are withdrawn. Claims 1, 3, 5-10, 47 and 49-52 are under consideration.

Response to Arguments

2. Applicant's arguments filed November 2, 2010 have been fully considered but they are not persuasive.

With respect to the objection to the specification, Applicant (at paragraph bridging pages 13 and 14) argues the specification provides antecedent basis for the feature of "a plate located inside one of said upper bonnet and said lower bonnet, wherein the plate comprises a planar surface structured to contact the surface of the blind," since this feature, e.g., is depicted in the drawings in Figure 11. However, the objection is that the specification (and not the drawings) fails to provide antecedent basis for the claimed feature. The objection has been maintained because the specification is completely silent as to the feature which is depicted in the figure.

With respect to the rejection under 35 U.S.C. 112, first paragraph, Applicant (at page 14, last paragraph) argues that the claimed subject matter of "a plate located inside one of said upper bonnet and said lower bonnet, wherein the plate comprises a planar surface structured to contact the surface of the blind," is supported by the original disclosure, e.g., as depicted in Figure 11 of the drawings. However, the rejection has been maintained because although Figure 11 depicts a plate (i.e., one of the two unlabeled parallel plates that sandwich the valve closure **720** on the left side of the figure), the figure does not provide support for locating the plate within either one of

said upper bonnet and said lower bonnet. Figure 11 merely shows the plate being provided at one end of the valve, within one of the bonnets, and the specification is silent as to whether the plate may be alternatively disposed at the other end of the valve, within the other bonnet.

With respect to the rejections under 35 U.S.C. 103(a), Applicant (at page 16, third paragraph) argues that the combinations of references each fail to teach the claimed feature of, “a plate located inside one of said upper bonnet and said lower bonnet, wherein the plate comprises a planar surface structured to contact the surface of the valve closure.” Specifically,

“... the pending Action indicates that Jandrasi's guide 32 as illustrated in figures 1A and discussed in column 1, lines 57-63 reads on “a plate comprising a planar surface structured to contact the surface, the blind.” However, Jandrasi discloses a notch and groove rail system for guiding one of the slides, not a planar surface to contact the surface of a blind. This relationship is illustrated clearly in Figure 4, where the notch and groove system guiding a slide is illustrated clearly. Because feature 32 disclosed by Jandrasi is not a large planar surface utilized to sandwich a valve closure, the disclosure in Jandrasi fails to teach or suggest “a plate comprising a planar surface structured to contact the surface other blind.”

The Examiner respectfully disagrees. The claims recite, “the plate comprises a planar surface structured to contact the surface of the valve closure”. Jandrasi discloses that the plate **32** comprises a planar surface (e.g., the planar surface(s) created by the notch **34** or **36**, FIG. 4) structured to contact the surface of the valve closure **26** or **28** (e.g., the surface of the closure in the region of tongue **30** and the edge regions of overlapping portions **48**, **50**; see FIG. 2, 2A). The plate **32** therefore structurally meets the language of the claim.

It is noted that the features upon which Applicant relies (e.g., plates comprising large planar surfaces to sandwich the valve closure) are not recited in the rejected claim(s). Although

the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In addition, it is noted that Bryant, which was applied as a secondary reference but not addressed by Applicant, teaches a valve (see FIG. 1) comprising an upper bonnet and a lower bonnet, wherein a plate (i.e., guard means comprising plate **80**; column 4, lines 45-57) is located inside one of said upper bonnet and said lower bonnet, the plate comprising a planar surface structured to contact the surface of the valve closure (i.e., gate **21**). The plate defines a large planar surface which is utilized to sandwich the valve closure. The plate functions as a guide for the opening and closing of the valve closure and a guard for protecting the valve closure.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. The Examiner is unable to locate any discussion of "a plate located inside one of said upper bonnet and said lower bonnet, wherein the plate comprises a planar surface structured to contact the surface of the blind," recited in claim 1, lines 16-18, and claim 47, lines 7-8. See 37 CFR 1.75(d)(1), MPEP § 608.01(o). Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 3, 5-10, 47 and 49-52 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled

in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 1 and 47, the feature of “a plate located inside one of said upper bonnet and said lower bonnet, wherein the plate comprises a planar surface structured to contact the surface of the blind” does not appear to be supported by the originally filed disclosure. The Examiner is unable to locate any specific discussion of this feature within the specification. Although FIG. 11 appears to suggest this feature (i.e., two unlabeled parallel plates sandwich the valve closure **720** on the left side of the figure), the figure does not provide support for locating the plate within either one of said upper bonnet and said lower bonnet.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, 5-7, 9, 10, 47, 50 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Payne et al. (US 2,403,608) in view of Richards (US 4,335,733), Jandrasi et al. (US 4,531,539) and Bryant (US 2,950,897).

Regarding claims 1, 3, 5-7, 9, 10, 47 and 50, Payne et al. (FIG. 1; column 2, line 25 to column 4, line 22) discloses an apparatus comprising: (a) a coke drum (i.e., coking chamber **1**) having at least one port therein, said coke drum capable of receiving molten petroleum residuum (i.e., from tubular heating furnace **2**); and (b) a de-header valve (i.e., closure **15**, comprising a sliding valve or other suitable closure; see column 2, line 47 to column 3, line 1) coupled to said

port of said coke drum **1** for regulating the throughput of coked material **7**.

The apparatus of Payne et al. is the same as the instantly claimed apparatus, except Payne et al. is silent as to the valve **15** having the claimed configuration.

Richards (generally, FIGs. 1-11) discloses a valve **1** capable of being removably coupled to a drum (e.g., hopper **3**; FIG. 1), said valve comprising: (1) a main body having an orifice (i.e., defining inlet chamber **23** and outlet chamber **28**) dimensioned to align with a port of said drum when the valve is coupled thereto; (2) a valve closure (i.e., valve plate assembly **52** defining a sliding blind; FIG. 6) operably supported by said main body, said valve closure being actuated to oscillate between an open and a closed position with respect to said orifice and said port; (3) a seat support system structured to support said valve closure, said seat support system comprising dual independent seats positioned opposite one another on either side of the valve closure **52** and including a live loaded dynamic seat (i.e., floating wear plate **38**; e.g., actuated pneumatically; FIG. 6) and a static seat (i.e., fixed wear plate **30**; FIG. 6); wherein a continuously maintained metal-to-metal contact seal between valve closure **52** and seat support system **38,30** exists (i.e., at T-T; see column 5, lines 31-38; FIG. 11), said contact seal being capable of shearing accumulated solids upon actuation of the valve closure. The valve **1** comprises a purge system operably connected to the main body, allowing a gas to be vented from the valve (i.e., via vent valve **109**; FIG. 9; column 63-64). The valve **1** comprises an internal material isolation and containment system operably connected to the main body, which allows the valve to be pressurized (FIG. 9; column 7, lines 37-60; column 2, lines 33-45). Richards also teaches that the seat **38** may comprise an upper seat, instead of a lower seat (see column 9, lines 24-33). Furthermore, the seat **38** would be structurally capable of moving axially while the valve closure

52 is actuated between the open and the closed positions (i.e., the plate **38** “floats” in the sense that it is free to move axially on the extensions **37**; see column 4, lines 55-57; also, column 5, lines 27-31). In addition, Richards (see FIG. 6) discloses that the valve comprises an upper bonnet coupled to the main body (i.e., defined by casing portion **11** and cover **16**) and a lower bonnet coupled to the main body (i.e., defined by casing portion **11** and cover **14**).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to substitute the valve taught by Richards for the valve **15** in the apparatus of Payne et al., because the valve would have predictably provided a satisfactory means for isolating and regulating the flow of coked material from the coking chamber, given its suitability of use in handling liquids and abrasive materials under high pressure and high temperature, as taught by Richards (see column 2, lines 46-64; column 1, lines 31-36). Furthermore, the substitution of known equivalent structures involves only ordinary skill in the art, and when the prior art is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.

The combination of Payne et al. and Richards fails to suggest the claimed feature of a plate located inside one of said upper bonnet and said lower bonnet, wherein the plate comprises a planar surface structured to contact the surface of the valve closure.

Jandrasi et al., however, teaches a valve comprising an upper bonnet and a lower bonnet (i.e., defining chambers **16**; FIG. 1A), wherein a plate (i.e., guide **32**; FIG. 1A; column 1, lines 57-63) is located inside one of said upper bonnet and said lower bonnet, the plate comprising a planar surface structured to contact the surface of the valve closure (e.g., slide **26**). Bryant (see FIG. 1) also teaches a valve comprising an upper bonnet and a lower bonnet, wherein a plate

(i.e., guard means comprising plate **80**; column 4, lines 45-57) is located inside one of said upper bonnet and said lower bonnet, the plate comprising a planar surface structured to contact the surface of the valve closure (i.e., gate **21**).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to provide a plate inside one of said upper bonnet and said lower bonnet in the modified apparatus of Payne et al., because the plate would have served as a guide for the opening and closing of the valve closure and a guard for protecting the valve closure, as taught by Jandrasi et al. and Bryant.

Regarding claim 51, the term “comprises” (line 2) is open-ended and does not exclude additional, unrecited elements. Thus, the modified apparatus of Payne et al., which comprises a seat support system with two seats, meets the language of the claim.

6. Claims 1, 3, 5-8, 47 and 49-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Payne et al. (US 2,403,608) in view of Fortune (US 3,367,625) and Jandrasi et al. (US 4,531,539).

Regarding claims 1, 7 and 47, Payne et al. (see FIG. 1; column 2, line 25 to column 4, line 22) discloses an apparatus comprising: (a) a coke drum (i.e., coking chamber **1**) having at least one port therein, said coke drum capable of receiving molten petroleum residuum (i.e., which would flow from tubular heating furnace **2**); and (b) a de-header valve (i.e., closure **15**, comprising a sliding valve or other suitable closure; see column 2, line 47 to column 3, line 1) coupled to said port of said coke drum **1** for regulating the throughput of coked material **7**.

The apparatus of Payne et al. is the same as the instantly claimed apparatus, except Payne et al. is silent as to the valve **15** having the claimed configuration.

Fortune discloses a valve (generally, FIGs. 1-9) comprising: (1) a main body (i.e., valve body **A**, with circular wall **10** and flanges **8**); (2) a valve closure (i.e., slideable gate **18**, defining a sliding blind) operably supported by the main body, said valve closure capable of being actuated to oscillate between an open and a closed positioned; (3) a seat support system structured to support the valve closure, wherein said seat support system (see, e.g., FIGs. 3, 8, 9) comprises at least one live loaded seat (i.e., pressure actuated annular seat **24**; e.g., actuated pneumatically or via springs); wherein a continuously maintained metal to metal contact seal (i.e., at surfaces **25**; see column 2, lines 9-16) exists between the valve closure and the seat support system, said contact seal being capable of shearing accumulated solids upon actuation of the valve closure (see column 7, line 68 to column 8, line 3). At least one of the live loaded dynamic seats **24** may be configured as an upper seat depending on the orientation of the valve, given that the valve comprises two live loaded dynamic seats. Furthermore, the seats **24** would be structurally capable of moving axially while the valve closure **18** was actuated between the open and closed position (i.e., by pneumatic pressurization of the reservoir **22** in FIG. 3; or by the force of the springs **77** in FIGs. 8, 9). In addition, Fortune et al. discloses an upper bonnet coupled to the main body (i.e., closed bonnet **30**; FIGs. 1, 2) and a lower bonnet coupled to the main body (i.e., the walls defining packet **72**; FIGs. 1-4).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to substitute the valve taught by Fortune for the valve **15** in the apparatus of Payne et al., because the valve would have predictably provided a satisfactory means for isolating and regulating the flow of coked material from the coking chamber, given that the valve provides a drop-tight seal between the gate and the seats, and the valve seats are not subject to the problems

of erosion and corrosion of the prior art, as taught by Fortune (see column 1, lines 13-20 and 60-65; column 2, lines 1-8). Also, the substitution of known equivalent structures involves only ordinary skill in the art, and when the prior art is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.

The combination of Payne et al. and Fortune fails to suggest the claimed feature of a plate located inside one of said upper bonnet and said lower bonnet, wherein the plate comprises a planar surface structured to contact the surface of the valve closure.

Jandrasi et al., however, teaches a valve (see FIG. 1A) comprising an upper bonnet and a lower bonnet (i.e., defining chambers **16**), wherein a plate (i.e., guide **32**; column 1, lines 57-63) is located inside one of said upper bonnet and said lower bonnet, the plate comprising a planar surface structured to contact the surface of the valve closure (e.g., slide **26**).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to provide a plate inside one of said upper bonnet and said lower bonnet in the modified apparatus of Payne et al., because the plate would have served as a guide for the opening and closing of the valve closure, as taught by Jandrasi et al.

Regarding claims 3, 5, 6, 49 and 50, Fortune teaches that the valve comprises dual independent live loaded dynamic seats **24** (see FIG. 3) positioned on opposing sides of the valve closure **18**. Fortune further teaches that the valve comprises dual independent static seats (i.e., defined by the circular wall **10** itself; see FIG. 3) positioned on opposing sides of the valve closure **18**. Fortune further teaches at least one static seat (i.e., defined by the circular wall **10** itself; see FIG. 3) positioned opposite at least one live loaded seat **24**.

Regarding claims 8 and 52, Fortune teaches a main body **10** capable of contacting valve

closure **18** (i.e., by an appropriate degree of actuation of hydraulic, pneumatic or mechanical pressurization means against seats **24**), thereby functioning as a seat in said seat support system.

Regarding claim 51, the term “comprises” (line 2) is open-ended and does not exclude additional, unrecited elements. Thus, the modified apparatus of Payne et al., which comprises a seat support system with two seats, meets the language of the claim.

7. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Payne et al. (US 2,403,608) in view of Fortune (US 3,367,625) and Jandrasi et al. (US 4,531,539), as applied to claim 1 above, and further in view of Richards (US 4,335,733).

The combination of Payne et al., Fortune and Jandrasi et al. fails to disclose the claimed purge system or internal material isolation system.

Richards, however, teaches a valve **1** comprising a purge system operably connected to the main body, said purge system allowing a gas to be vented from the valve (i.e., via vent valve **109**; FIG. 9; column 63-64). The valve **1** further comprises an internal material isolation and containment system operably connected to the main body, wherein the material isolation and containment system allows the valve to be pressurized (see FIG. 9; column 7, lines 37-60; column 2, lines 33-45).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to provide a purge system and internal material isolation system for the valve in the modified apparatus of Payne et al., because the systems help minimize and avoid wear of the valve by preventing abrasive material from getting between the plates, and further allow for temperature control of the valve, as taught by Richards (see column 2, lines 33-45; column 8, lines 8-30, 38-50).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

* * *

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER A. LEUNG whose telephone number is (571) 272-1449. The examiner can normally be reached on 9:30 am - 5:30 pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter D. Griffin can be reached on (571) 272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jennifer A. Leung/
Primary Examiner, Art Unit 1774